Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	
Expanding Flexible Use of the 3.7 GHz to 4.2 GHz Band	GN Docket No. 18-122
Petition for Rulemaking to Amend and Modernize Parts 25 and 101 of the Commission's Rules to Authorize and Facilitate the Deployment of Licensed Point-to-Multipoint Fixed Wireless Broadband Service in the 3.7-4.2 GHz Band	RM-11791
Fixed Wireless Communications Coalition, Inc., Request for Modified Coordination Procedures in Band Shared Between the Fixed Service and the Fixed Satellite Service	RM-11778

Reply Comments of Alaska Communications Internet, LLC

Alaska Communications offers these Reply Comments in the above-captioned proceedings to highlight the broad and compelling support in the record for excluding Alaska from any introduction of new terrestrial mobile services in the 3.7-4.2 GHz band currently licensed for satellite C-band downlink (space-to-Earth) operations and point-to-point microwave services.[1]

In the NPRM, the Commission itself recognized that, in rural areas, there are relatively few terrestrial substitutes for Fixed Satellite Service ("FSS") and correspondingly lower demand for additional spectrum resources devoted to terrestrial mobile data services.[2] Thus, C-band FSS in rural and remote areas of the nation is a far more important driver of broadband connectivity than would be any reallocation of this spectrum for terrestrial use.

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[1] *Expanding Flexible Use of the 3.7 to 4.2 GHz Band*, GN Docket No. 18-122, Order and Notice of Proposed Rulemaking, FCC 18-91 (rel. July 13, 2018). These Reply Comments will refer to the two portions of the Commission's action as the "Order" and "NPRM," respectively.

[2] NPRM at ¶ 64 "The value of spectrum in alternative uses like mobile data is likely highest in dense urban areas . . . . FSS substitutes, particularly fiber, are most prevalent in urban areas while in rural areas there are fewer [Fixed Satellite Service] substitutes. Thus, in rural areas, typically the value of the spectrum remaining in FSS is relatively high while the opportunity cost of clearing less flexible-use spectrum is relatively low, suggesting that the amount of spectrum repurposed should vary across geographic areas.").

In considering this balance between urban and rural needs, Alaska represents an extreme case that warrants no reallocation whatsoever of C-band spectrum to terrestrial use. The record overwhelmingly reflects the absolutely critical role that C-band FSS plays in delivering voice and broadband connectivity in rural and remote Alaska.[3] In contrast, no lack of available terrestrial spectrum resources is constraining the ability of commercial providers to bring wireless data services to market in Alaska today. Rather, the small size and extreme remoteness of Alaska's communities make such deployment logistically daunting and economically prohibitive.

Thus, Alaska Communications agrees with AT&T that reallocation of C-band downlink spectrum outside of the continental United States ("CONUS") raises fundamentally different policy considerations and should be excluded from consideration in this proceeding.[4] Similarly, the Satellite Industry Association ("SIA") correctly points out that the C-band is essential to "serve communities in remote parts of Alaska that lack terrestrial alternatives."[5] And, National Public Radio ("NPR") echoes Alaska Communications' own comments in pointing out that, "it is unlikely that mobile wireless carriers will use C-band to provide 5G service in anything close to the majority of the state [of Alaska] in the coming years, and thus retaining all 500 MHz of C-band spectrum for satellite downlinks remains the most efficient use."[6] GCI, too, explains the many ways in which C-band FSS is uniquely able to meet the needs of Alaska's remote communities, the Federal Aviation Administration, and FCC priorities such as broadband

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[3] C-band FCC, for example, is critical to delivering 911 calls, and coordinating other public safety, health and educational activities.

[4] AT&T comments at 4, n.6 ("AT&T believes that reallocation outside the CONUS may have different policy considerations. Not only are the needs different in Alaska, Hawaii, Puerto Rico, and the U.S. protectorates, but the considerations governing the satellites with coverage that includes those areas may also be considerably different. Thus, AT&T agrees with CBA that both the basis for, and the factual background of, the non-CONUS regions may militate in favor of separate consideration.").

[5] SIA comments at 5.

[6] NPR comments at 14-15.

deployment under the Connect America Fund high cost program, as well as affordable broadband services for schools, libraries, and rural health care providers.[7]

Recognizing these facts, the C-Band Alliance has proposed a plan for a Market-Based Approach that would explicitly exclude Alaska, Hawaii, and the U. S. territories from any repurposing of C-band downlink spectrum to terrestrial use, and has pledged that, "[e]arth station operators in these areas would not be impacted."[8] Even T-Mobile, which might be expected to advocate strongly for repurposing this spectrum to terrestrial use concedes that, in Alaska, "satellite communications are uniquely critical to maintaining connectivity" and that it would thus be appropriate to "retain more spectrum" for satellite services in the state.[9] Alaska Communications agrees with these commenters and supports this exclusion as best serving the public interest in our state.

Without mentioning Alaska specifically, some commenters argue that the repurposing of C-band downlink spectrum for terrestrial mobile data use is particularly important in rural areas to help close the urban-rural digital divide.[10] Whatever the merits of such arguments in the lower 48 states, they fail to address the unique challenges that Alaska presents. Alaska's rural and remote communities are uniquely isolated from the state's population centers, from one another, and from basic infrastructure that is a prerequisite for terrestrial mobile data services to function. Often these villages are separated from the state's core telecommunications networks by hundreds of

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7 GCI comments at 5-9.

8 C-Band Alliance comments at 22, n.50. *See also* Eutelsat comments at 2 (highlighting that the C-Band Alliance proposal will apply only to the continental United States); QVC/HSN Comments at 6 (same); Speedcast Communications comments at 5 ("By excluding Alaska, Hawaii, and offshore locations such as oil and gas platforms in the Gulf of Mexico from the transition, the Commission would help preserve that spectrum for continued use for C-band downlink operations. Given that FSS is often the only viable alternative to connect such remote points, it would strongly serve the public interest to maintain today's range of available FSS options, including the C-band.").

9 T-Mobile comments at 7, n.7.

10 *See, e.g.,* Broadband Connects America Coalition comments at 17; Public Interest Spectrum Coalition comments at 5; Broadband Access Coalition at 1.

miles of open ocean or undeveloped land. Thus, in Alaska, towers for mounting wireless base stations are not only difficult to difficult and costly to construct, but they may lack commercial power, making them also costly and difficult to operate.

Aside from the high cost of deploying new wireless data infrastructure in such remote locales, the state suffers from a dearth of affordable terrestrial middle mile backhaul capacity, which is necessary to connect Alaska's remote communities to the global telecommunications and data networks that enable those data services to function. For that reason, many remote Alaska villages in Alaska today still utilize satellite-based middle mile backhaul, and thus are limited to "2G" voice or, at best, "3G" data. The FCC has recently committed substantial federal Connect America Fund high cost support to enable the deployment of limited 4G services in such remote villages, much of which will also utilize satellite backhaul to operate.[11] Accordingly, even if new terrestrial mobile "5G" services were deployed in a remote Alaska village – itself an unlikely possibility – the service would, as likely as not, need to use a local satellite terminal in order to reach the rest of the world.[12]

Thus, the Commission should exclude Alaska from any repurposing of C-band satellite downlink spectrum to terrestrial mobile data use. As the record amply reflects, the C-band spectrum is vital to support broadband connectivity for a multitude of purposes across the state today, including backhaul of mobile data in areas where such services exist. Moreover, existing

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[11] *See, e.g., Connect America Fund*, WC Docket No 10-90, *Ex Parte* Letter of Alaska Telephone Association (filed May 9, 2016), at 39 (proposal of General Communications Corporation to use substantial federal Connect America Fund high cost support to deploy 4G mobile data services using satellite backhaul), *available at*: https://ecfsapi.fcc.gov/file/60001841040.pdf.

[12] *See, e.g.,* GCI Communication Corp., Application for New Permanent Earth Station, File No. SES-LIC-20180608-01392 (filed June 8, 2018), Request for Waiver of Temporary Filing Freeze, at 2-3 (seeking a waiver of the C-band filing freeze because terrestrial microwave service is unreliable in the area due to severe icing issues, and stating that reliable satellite-based long-haul transport is needed to provide the "primary link to communications in these villages," that "provides not only mobile wireless voice and broadband services, but also supports telehealth services, school access services, wireless 911 routing, and serves as a backup to wireline 911 services").

spectrum allocations are sufficient to support improved mobile data services, including 5G, if market demand levels emerge in the state to make such services economically and commercially viable. And, that dynamic is expected to continue in the state for the foreseeable future.

Conclusion

For the foregoing reasons, Alaska Communications urges the Commission to exclude Alaska from any repurposing of C-band downlink spectrum to terrestrial use.

Respectfully submitted,

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